

WHAT IS CLAIMED IS:

1. A folding cylinder comprising: ⁸ a frame having a work-side support and a gear-side support; ⁹
at least one expansion segment ^{via 18, 19} for providing an effective diameter of the ^{ABS; IN. 273} cylinder, the expansion segment being located between the work-side support and the ^{18, 19} gear-side support and spaced apart from at least one of the work-side support and the ^{9 F.2} gear-side support; and ^{via 20 F.2}
an actuating device ⁷ for contacting the at least one expansion segment and ^{F.2 83} setting the effective diameter.
2. The folding cylinder as recited in claim 1 wherein the at least one expansion segment is spaced-apart from both the work-side support and the gear-side support. ^{F.2}
3. The folding cylinder as recited in claim 1 wherein the expansion segment includes ^{18, 19} an outer section and a plurality of J-shaped brackets ^{F.2; via 19} connected to the outer section, a ¹⁸ first J-bracket being spaced apart from the work-side support ⁸ and a second J-bracket being spaced apart from the gear-side support ⁹. ^{F.2}
4. The folding cylinder as recited in claim 3 wherein an end of the J-shaped brackets located opposite the outer section interacts with eccentrics ^{via 20} on a camshaft, a rotational angle of the camshaft being adjustable. ^{col. 4; para. 25-29}
5. The folding cylinder as recited in claim 1 wherein the frame includes ^{pin} a tie support ^{via 16} between the gear-side and work-side supports, and further comprising a plurality of springs on the tie support for forcing the expansion segment radially outwardly.
6. The folding cylinder as recited in claim 1 further comprising a foam piece in a space between the expansion segment and the at least one of the gear-side and work

side supports.

7. The folding cylinder as recited in claim 2 further comprising foam pieces between the expansion segment and the work-side support and between the expansion segment and the gear side support.

8. The folding cylinder as recited in claim 3 further comprising a foam piece attached to a side of the first J-bracket.

9. The folding cylinder as recited in claim 8 wherein the foam piece covers the side in its entirety.

10. The folding cylinder as recited in claim 6 wherein the foam piece includes a friction-reducing coating.

11. The folding cylinder as recited in claim 1 wherein the cylinder is a pin cylinder of a cross-folder.

12. A method of manufacturing a folding cylinder comprising the steps of:
providing an expansion segment between a folding cylinder frame having a work and gear side; and
spacing the expansion segment from the frame.

13. The method as recited in claim 12 further comprising applying foam to the expansion segment.

29/436